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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,829	06/19/2001	Karel Van den Berg	8553/221	2485
7590	04/08/2004		EXAMINER	
Penrose Lucas Albright, Esq. MASON, MASON & ALBRIGHT P.O. Box 2246 Arlington, VA 22202-0246			FERGUSON, MICHAEL P	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/884,829	VAN DEN BERG, KAREL
	Examiner Michael P. Ferguson	Art Unit 3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 17 February 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 85-103 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 85-103 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 19 June 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 17, 2004 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 85-89, 94 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stum (US 3,650,492) in view of Böttlinger et al. (US 5,913,801).

As to claim 85, Stum discloses an apparatus for demarcating an area which comprises a demarcation element which includes a section (wire wound on drum 25), and a vehicle (tractor attached to hitch 16) connected to an end of the section (Figure 1).

Stum fails to disclose an apparatus comprising a vehicle including a geodetic positioning system for selectively positioning the end of the section of the demarcation

element, angle measuring means associated with the demarcation element for determining the angle between a predetermined direction and the section.

Böttinger et al. teaches an apparatus comprising a vehicle (tractor) including a geodetic positioning system for selectively positioning a baler, angle measuring means (GPS using angle measuring means and predetermined reference points to determine an object's position and direction) associated with the baler for determining the angle between a predetermined direction and the baler; the geodetic positioning system providing for accurate positioning of the baler (column 3 lines 45-50).

It would be advantageous for an apparatus as disclosed by Stum to comprise a vehicle including a geodetic positioning system for selectively positioning the demarcation element, angle measuring means associated with the demarcation element for determining the angle between a predetermined direction and a section to providing for accurate positioning of the section.

As it would be advantageous for an apparatus as disclosed by Stum to comprise a vehicle including a geodetic positioning system for selectively positioning the demarcation element, angle measuring means associated with the demarcation element for determining the angle between a predetermined direction and a section to providing for accurate positioning of the section, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Stum to comprise a vehicle including a geodetic positioning system for selectively positioning the demarcation element, angle measuring means associated with the demarcation element for determining the angle between a predetermined

direction and a section as taught by Böttinger et al. to providing for accurate positioning of the section.

As to claim 86, Stum discloses an apparatus wherein a demarcation element is flexible so that it can be wound and rewound.

As to claim 87, Stum discloses an apparatus wherein a demarcation element includes tightening means **18** for tightening the demarcation element (Figures 1 and 2).

As to claim 88, Stum discloses an apparatus wherein a section (wire wound on drum **25**) is adjustable in length, the apparatus further comprising winding means **18** for winding and unwinding the adjustable section (Figures 1 and 2).

As to claim 89, Stum discloses an apparatus wherein winding means **18** is fitted to a vehicle (tractor; Figures 1 and 2).

As to claim 94, Stum discloses an apparatus wherein a vehicle (tractor) comprises ground engaging rotatable members that support the vehicle, the ground engaging rotatable members consisting of essentially two members.

As to claim 96, Stum discloses an apparatus wherein a demarcation element is flexible, tightening means **18** being provided for the demarcation element, the tightening means comprising a motor **11** (Figures 1 and 2).

3. Claims 85-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulte (DE 42 15 714) in view of Ruffner (USPN 6,338,013).

As to claim 85, Schulte discloses an apparatus for demarcating an area which has a demarcation element which has a section **6**, and a vehicle **4** connected to an end of the section, the vehicle having a time switch system **38** (the timer **38** selectively

positioning the end of the section **6** at pre-programmed locations at pre-programmed times and intervals) for selectively positioning the end of the section of the demarcation element, angle measuring means **40,41** associated with the demarcation element for determining the angle between a predetermined direction (vertically upright) and the section (Figures 1, 5 and 6; abstract).

.Schulte fails to disclose an apparatus having a vehicle having a geodetic positioning system for selectively positioning the end of a section of a demarcation element.

Ruffner teaches an apparatus for mowing an area which has a mowing element **45** and a vehicle **1** connected to the mowing element, the vehicle having a geodetic positioning system for selectively positioning the mowing element; a GPS system providing for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage (Figure 1; column 1 lines 50-62, column 8 lines 38-65, column 31 lines 13-25).

It would be advantageous for an apparatus as disclosed by Schulte to have a vehicle having a geodetic positioning system for selectively positioning the vehicle to provide for more precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage.

As it would be advantageous for an apparatus as disclosed by Schulte to have a vehicle having a geodetic positioning system for selectively positioning the vehicle to provide for more precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Schulte to have a vehicle having a geodetic positioning system for selectively positioning the vehicle as taught by Ruffner to provide for more precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage.

As to claim 86, Schulte discloses an apparatus wherein a demarcation element **6** is flexible so that it can be wound and rewound (Figure 1).

As to claim 87, Schulte discloses an apparatus wherein a demarcation element **6** has tightening means **42** for tightening the demarcation element (Figure 1).

As to claim 88, Schulte discloses an apparatus wherein a section **6** is adjustable in length, the apparatus having winding means **42** for winding and unwinding the adjustable section (Figure 1).

As to claim 89, Schulte discloses an apparatus wherein a winding means **42** is fitted to a vehicle **4** (Figure 1).

As to claim 90, Schulte discloses an apparatus which has a reference point which is connected to another end of a section **6**, a winding means **42** being disposed at the reference point (Figures 1 and 3, abstract).

As to claim 91, Schulte discloses an apparatus which has a section length measuring means for determining the length of a section **6** between a reference point and a vehicle (Figure 4, abstract).

As to claim 92, Schulte fails to disclose an apparatus wherein a vehicle is provided with solar panels for its energy supply.

Ruffner teaches an apparatus wherein a vehicle **1** is provided with solar panels **16,62** for its energy supply; solar panels mounted on the vehicle supplying energy for recharging the vehicle's battery (Figure 1, column 6 lines 45-54).

It would be advantageous for an apparatus as disclosed by Schulte to have a vehicle provided with solar panels to supply energy for recharging of the vehicle's battery.

As it would be advantageous for an apparatus as disclosed by Schulte to have a vehicle provided with solar panels to supply energy for recharging of the vehicle's battery, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Schulte to have a vehicle provided with solar panels as taught by Ruffner to supply energy for recharging of the vehicle's battery.

As to claim 93, Schulte discloses an apparatus wherein a vehicle **4** is an unmanned vehicle (Figure 1, abstract).

As to claim 94, Schulte discloses an apparatus wherein a vehicle **4** has ground engaging rotatable members **9,10** that support the vehicle, the ground engaging rotatable members consisting of essentially two members (Figure 1).

As to claim 95, Schulte discloses an apparatus wherein ground engaging rotatable members **9,10** are connected to drive means **17,18** so that they are independently drivable relative to each other (Figure 1).

As to claim 96, Schulte discloses an apparatus wherein a demarcation element **6** is flexible, tightening means **42** being provided for the demarcation element, the tightening means comprising a motor **17,18** (Figure 1).

As to claim 97, Schulte discloses an apparatus which has a further vehicle **5** and distance determining means for determining the distance between a first mentioned vehicle **4** and the further vehicle **5** (Figures 3 and 4).

As to claim 98, Schulte discloses an apparatus wherein a demarcation element **6** has a double conductor **30,32** (Figure 1).

As to claim 99, Schulte fails to disclose an apparatus which has a computer for remotely controlling the vehicle.

Ruffner teaches an apparatus which has a computer for remotely controlling the vehicle; the computer receiving position information from a GPS system and using it to direct movement of a vehicle **1** via motors (Figure 1, column 15 line 60- column 16 line 12, column 16 lines 50-59).

It would be advantageous for an apparatus as disclosed by Schulte to have a computer to receive position information from a GPS system and use it to direct movement of a vehicle via motors.

As it would be advantageous for an apparatus as disclosed by Schulte to have a computer to receive position information from a GPS system and use it to direct movement of a vehicle via motors, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Schulte to have a computer as taught by Ruffner to receive position information from a GPS system and use it to direct movement of a vehicle via motors.

As to claim 100, Schulte discloses an apparatus for demarcating an area which comprises a demarcation element **6** that includes a plurality of flexible sections, a plurality of vehicles **4,5**, each of the vehicles being connected to an end of one of the sections, one of the vehicles including a time switch system **38** (the timer **38** selectively positioning the end of the section **6** at pre-programmed locations at pre-programmed times and intervals) for selectively positioning the vehicles, and all of the vehicles including tightening means **42** adjustably positioning an end of one of the sections and tightening a section which extends between the vehicles, the vehicles each being supported by two wheels **9,10** which are independently controllable by motors **17,18** carried on the vehicles (Figure 1, 3 and 4; abstract).

Schulte fails to disclose an apparatus having a vehicle including a geodetic positioning system for selectively positioning the vehicles, and the apparatus further

comprising solar panels which are operatively connected to motors for providing energy to the motors.

Ruffner teaches an apparatus for mowing an area which comprises a mowing element **45** having a vehicle **1** including a geodetic positioning system for selectively positioning the vehicles; a GPS system providing for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage (Figure 1, column 1 lines 50-62, column 8 lines 38-65, column 31 lines 13-25); and the apparatus further comprising solar panels **16,62** which are operatively connected to motors for providing energy to the motors; solar panels mounted on the vehicle supplying energy for recharging the vehicle's battery (column 6 lines 45-54).

It would be advantageous for an apparatus as disclosed by Schulte to have a vehicle including a geodetic positioning system for selectively positioning the vehicle to provide for more precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage; and to have a vehicle provided with solar panels to supply energy for recharging of the vehicle's battery.

As it would be advantageous for an apparatus as disclosed by Schulte to have a vehicle including a geodetic positioning system for selectively positioning the vehicle to provide for more precise determination of the vehicle's location and precise scheduling

of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage; and to have a vehicle provided with solar panels to supply energy for recharging of the vehicle's battery, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an apparatus as disclosed by Schulte to have a vehicle including a geodetic positioning system for selectively positioning the vehicle as taught by Ruffner to provide for more precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage; and to have a vehicle provided with solar panels as taught by Ruffner to supply energy for recharging of the vehicle's battery.

As to claim 101, Schulte discloses a system for demarcating an area within a field to limit the freedom of movement of animals which comprises: a plurality of vehicles **4,5**; each of the vehicles connected to an electrified wire **6** which, in part, defines the area; each of the vehicles having motive means for moving the vehicle and a power source **17,18** for energizing the motive means, each of the vehicles having two ground engaging members **9,10** for moving and steering it which are rotated by the motive means; one of the vehicles having a reel **42** upon which the wire can be wound and unwound and which tightens the wire; and each of the vehicles having location determining means via a time switch positioning system **38** (the timer **38** selectively positioning the end of the section **6** at pre-programmed locations at pre-programmed

times and intervals) which determines the position of each of the vehicles relative to the vehicles starting location, the time switch being programmed so that the vehicles move to predetermined locations at predetermined points of time according to a predetermined pattern (Figures 1,3 and 4; abstract).

Schulte fails to disclose a system having a computer that controls each of the vehicles; and each of the vehicles having location determining means via a geodetic positioning system which cooperates with the computer for determining the position of each of the vehicles relative to the field, the computer being programmed so that the vehicles are controlled by the computer and move to predetermined locations at predetermined points of time according to a predetermined pattern.

Ruffner teaches a system for mowing an area within a field which comprises: a vehicle **1**; the vehicles having motive means for moving the vehicle and a power source for energizing the motive means, the vehicle having two ground engaging members **19** for moving and steering it which are rotated by the motive means; a computer that controls the vehicle; and each of the vehicles having location determining means via a geodetic positioning system which cooperates with the computer for determining the position of each of the vehicles relative to the field; a GPS system providing for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage (Figure 1, column 1 lines 50-62, column 8 lines 38-65, column 31 lines 13-25); the computer being programmed so that the vehicles are controlled by the computer and move to

predetermined locations at predetermined points of time according to a predetermined pattern; the computer receiving position information from a GPS system and using it to direct movement of a vehicle 1 via motors (column 15 line 60- column 16 line 12, column 16 lines 50-59).

It would be advantageous for a system as disclosed by Schulte to have vehicles having location determining means via a geodetic positioning system which cooperates with a computer for determining the position of each of the vehicles relative to the field, the computer being programmed so that the vehicles are controlled by the computer to provide for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage; the computer receiving position information from a GPS system and using it to direct movement of a vehicle via motors.

As it would be advantageous for a system as disclosed by Schulte to have vehicles having location determining means via a geodetic positioning system which cooperates with a computer for determining the position of each of the vehicles relative to the field, the computer being programmed so that the vehicles are controlled by the computer to provide for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage; the computer receiving position information from a GPS system and using it to direct movement of a vehicle via motors, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to modify a system as disclosed by Schulte to have vehicles having location determining means via a geodetic positioning system which cooperates with a computer for determining the position of each of the vehicles relative to the field, the computer being programmed so that the vehicles are controlled by the computer as taught by Ruffner to provide for precise determination of the vehicle's location and precise scheduling of tasks, the GPS system providing for the correction of errors in location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage; the computer receiving position information from a GPS system and using it to direct movement of a vehicle via motors.

As to claim 102, Schulte discloses a system wherein ground engaging members **9,10** comprise wheels **12,14** which rotate about a respective axis of rotation (Figure 1).

Schulte fails to disclose a system wherein the center of gravity of each of the vehicles is below its respective axis of rotation.

Ruffner teaches a system wherein ground engaging members **19** comprise wheels which rotate about a respective axis of rotation, the center of gravity of each of a vehicle **1** being below its respective axis of rotation; the low center of gravity and large wheels enabling for easier maneuverability and preventing the vehicle from easily tipping over (Figure 1).

It would be advantageous for a system as disclosed by Schulte to have vehicles having a center of gravity below a respective axis of rotation to provide for easier maneuverability and preventing the vehicles from easily tipping over.

As it would be advantageous for a system as disclosed by Schulte to have vehicles having a center of gravity below a respective axis of rotation to provide for easier maneuverability and preventing the vehicles from easily tipping over, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a system as disclosed by Schulte to have vehicles having a center of gravity below a respective axis of rotation as taught by Ruffner to provide for easier maneuverability and preventing the vehicles from easily tipping over.

As to claim 103, Schulte discloses a system wherein a power source comprises for each vehicle a battery.

Schulte fails to disclose a system wherein a power source comprises for each vehicle a solar panel for charging the battery carried by each vehicle.

Ruffner teaches a system wherein a power source for a vehicle 1 comprises a battery and a solar panel **16,62** for charging the battery carried by each vehicle (Figure 1, column 6 lines 45-54).

It would be advantageous for a system as disclosed by Schulte to have a power source having for each vehicle a solar panel to supply energy for recharging of the vehicle's battery.

As it would be advantageous for a system as disclosed by Schulte to have a power source having for each vehicle a solar panel to supply energy for recharging of the vehicle's battery, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an system as disclosed by Schulte to have a

power source having for each vehicle a solar panel as taught by Ruffner for supplying energy for recharging of the vehicle's battery.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (703)308-8591. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (703)308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MPF



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